

RESEARCH NOTE

EREMOPUS ACUITLAPANENSIS, A NEW SPECIES (SOLIFUGAE, EREMOBATIDAE, EREMOBATINAE) FROM GUERRERO, MÉXICO

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A medium-to-deep fondal notch is usually present below the fixed finger on the chelicerae of male eremobatine solifugids. While studying a series of these arachnids from Guerrero, México, collected by members of the Instituto de Biología de Universidad Nacional Autónoma de México, we discovered a new eremobatine species whose uniquely modified fixed cheliceral finger bears a mesoventral flange that covers the fondal notch. Vázquez (1986) illustrated this species, but he did not offer a formal description. We now present a description.

Nomenclature and measurements (mm) were made as described in Muma (1951). The ratios CL/CW, PW/PL and A/CP, as defined by Brookhart & Muma (1981) and ECCS setae are also provided. Colors are from specimens preserved in alcohol. Type depositories are abbreviated as follows: IBUNAM = Laboratorio de Acarologia, Instituto de Biología, Universidad Nacional Autónoma de México, Coyoacán 04510, D.F., México; AMNH = American Museum of Natural History, New York.

Eremopus acuitlapanensis new species
Figs. 1–9, Tables 1, 2

Types.—Holotype, male: Mexico: *Guerrero*: Acuitlapan, 25 km East of Taxco (17°35'N, 99°15'W), 13 October 1976, Melgar, Novelo, Chavarría, collectors. Deposited in IBUNAM. Paratypes: Mexico: *Guerrero*: Acuitlapan, 13 October 1976, Melgar, Novelo, Chavarría, 1♂ (IBUNAM); Las Granadas, 28 October 1980, [collector unknown], 1♂ (AMNH); Acuitlapan, 25 km east of Taxco (17°35'N, 99°15'W), 13 October 1976, E. Cer-

vantes, 1♀ (IBUNAM); Acuitlapan, 23 January 1978, I. Espejel, 1♀ (AMNH).

Etymology.—The species name *acuitlapanensis* refers to Acuitlapan, Guerrero state, México, the place where the specimens were collected.

Diagnosis.—The presence on males of a wide, shallow, almost indistinct mesal crease on the fixed cheliceral finger, an anterior tooth on the movable cheliceral finger, and four long, stout needle-like ctenidia on the first post-spiracular abdominal sternite suggest a close relationship of this species to *Eremopus montezuma* Roewer 1934 and *Eremopus fuscus* (Muma 1987). Males of *Eremopus acuitlapanensis* new species are easily distinguished from other members of the genus by the presence of a mesoventral flange on the basal one-third of the fixed cheliceral finger. The flange almost covers the entire fondal notch. The genital opercula of females of *Eremopus acuitlapanensis* new species are similar to those of *E. fuscus* females, but the lateral concavities of *E. acuitlapanensis* opercula are a little closer together and the posterior margins are well-defined.

Description.—*Male*: Propeltidium yellow, wider than long, with a narrow, dusky band on anterior margin (measurements in Table 1). Eye tubercle dark; eyes separated by almost two diameters. Dorsal opisthosoma dark brown-to-black with pleural membranes grey-to-brown. First post-spiracular abdominal sternite provided with four long, stout needle-like ctenidia (Fig. 6), these extending beyond the middle of the succeeding sternite. Chelicera (Figs. 1–5) robust, yellow; dentition reddish-brown. Fixed finger straight, slightly down-

Table 1.—Measurements (mm) of male holotype and male paratypes of *Eremopus acuitlapanensis*. The data are taken from the holotype and two paratype specimens.

Structure	Length		Width		Ratios	
	Holotype	Paratype	Holotype	Paratype	Holotype	Paratype
Chelicerae	7.5	7.5, 7.7	3.7	3.7, 3.7	CL/CW = 2.03	2.03, 2.08
Propeltidium	4.0	4.0, 4.0	5.5	5.5, 5.7	PW/PL = 1.37	1.37, 1.42
Palpi	22.2	21.5, 22.2			A/CP = 6.09	5.83, 5.79
Legs I	18.4	18.0, 16.5				
Legs IV	29.5	27.5, 29.0				

turned distally, with part of the basal one-third forming a mesoventrally directed flange that covers almost the entire fondal notch (see arrow in Fig. 3). Mesal surface of fixed finger with a wide, shallow, crease extending from the tip of the finger a point above the uppermost tooth (I) of the ectal fondal tooth row (Fig. 3). Fondal teeth arranged in two rows of four teeth each, both graded I, III, II, IV in size. Movable finger with low, flattened anterior tooth, large principal tooth, and two small intermediate teeth contiguous with the principal tooth; small, distinct mesal tooth present. Flagellum complex with dorsal series of simple tubular setae and ventral series of slightly striate to plumose setae. Apical bristles of flagellum complex not conspicuously enlarged or flattened. Ectal cheliceral cluster setae as in Fig. 5. Palpi yellow, each with many cylindrical spine-like setae and long whip-like setae; scopula absent. Legs yellow, without dark markings. Malleoli white.

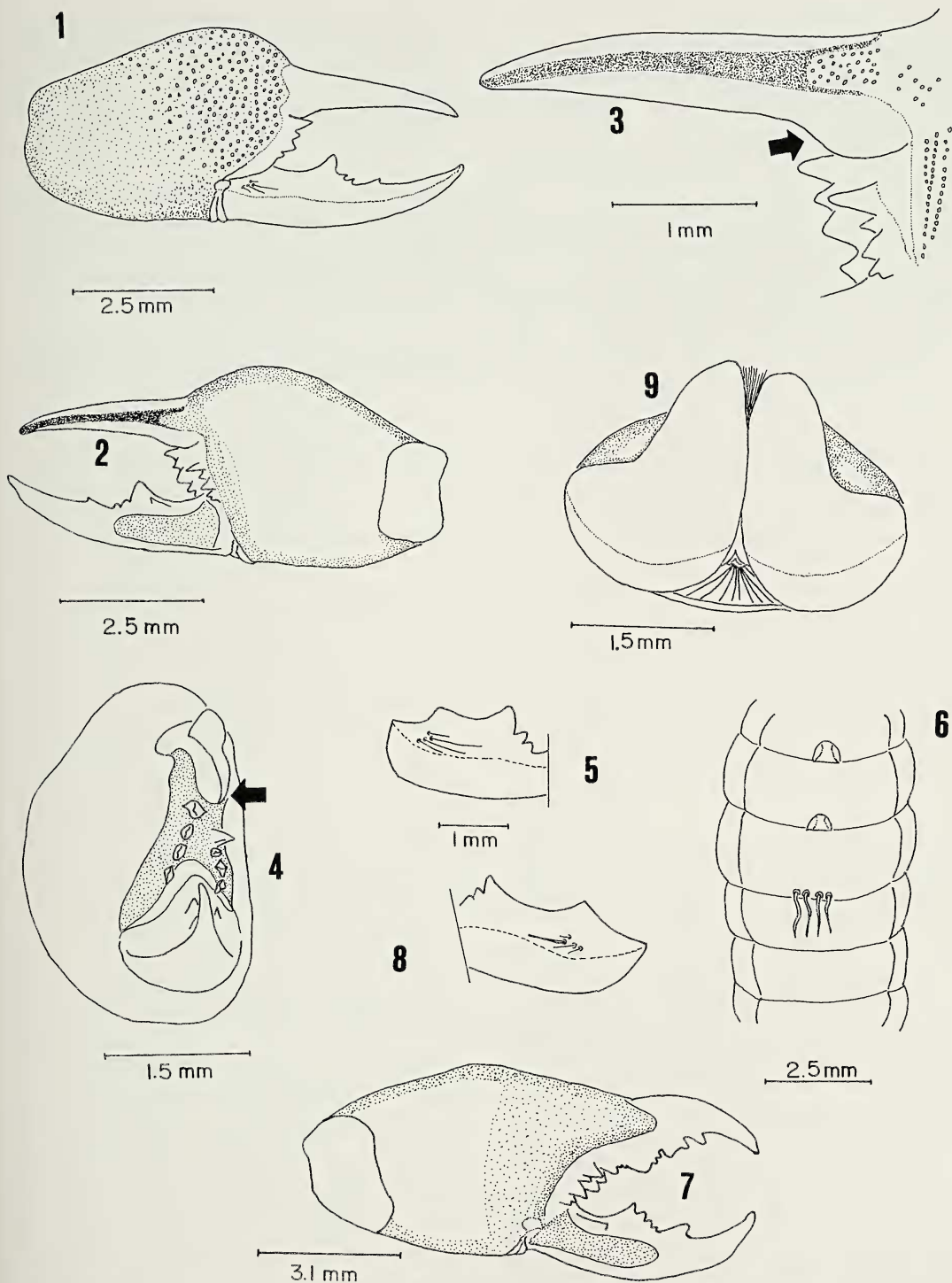
Female: Similar in form and coloration to male, but differing as follows. Opercula of genital segment (Fig. 9) with lobes extended laterally, slightly separated anteriorly and posteriorly, with a well-defined posterior border, and with a concavity on the ectal side of each

lobe. First post-spiracular sternite without ctenidia. Chelicerae (Fig. 7) proportionally larger than those of male. Fixed finger with a large principal tooth, a slightly smaller medial tooth, an anterior tooth which is half the size of the principal tooth, a well-developed intermediate tooth between the anterior and medial teeth, and three small intermediate teeth contiguous with the anterior margin of the principal tooth. Movable finger with a large principal tooth, a well-developed anterior tooth, and three small intermediate teeth contiguous with the anterior margin of the principal tooth; small, distinct mesal tooth present. Ectal cheliceral cluster setae as in Fig. 8.

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Table 2.—Measurements (mm) of female paratypes of *Eremopus acuitlapanensis*; the museum acronyms are given.

Structure	Length		Width		Ratios	
	IBUNAM	AMNH	IBUNAM	AMNH	IBUNAM	AMNH
Chelicerae	9.5	10.0	4.0	4.0	CL/CW = 2.40	2.50
Propeltidium	4.0	4.5	7.0	7.0	PW/PL = 1.75	1.55
Palpi	20.0	20.0			A/CP = 4.44	4.55
Legs I	16.0	17.0				
Legs IV	24.0	29.0				



Figures 1-9.—*Eremopus acuitlapanensis* new species. 1-6, Male holotype. 1. Ectal view of right chelicera; 2. Mesal view of right chelicera; 3. Mesal view of right chelicera (detail); 4. Frontal view of right chelicera; 5. Holotype ECCS setae of right chelicera; 6. Ventral view of abdominal tcnidia. 7-9. Female paratype. 7. Mesal view of left chelicera; 8. ECCS setae of left chelicera; 9. Genital opercula.

LITERATURE CITED

- Brookhart, J.O. & M.H. Muma. 1981. The *pallipes* species-group of *Eremobates* Banks (Solpugida: Arachnida) in the United States. Florida Entomol., 64(2):283–308.
- Muma, M.H. 1951. The arachnid order Solpugida in the United States. Bull. American Mus. Nat. Hist., 97:31–141.
- Muma, M.H. 1985. A new possibly diagnostic character for Solpugida (Arachnida). Nov. Arthropodae, 2(2):1–5.
- Muma, M.H. 1987. New species and records of Solpugida (Arachnida) from Mexico, Central America and the West Indies. Printed by Southwest Offset, Silver City, New Mexico. 31 pp.
- Roewer, C.F.R. 1934. Solifugae, Palpigradi. In Dr. H.G. Bronn's Klassen und Ordnungen des Tierreichs 5,4(4):1–723.
- Vázquez, I.M. 1986. Nuevos Eremobatidos Mexicanos (Arachnida: Solpugida). Proc. 9th Internat. Congr. Arachnol., Panama, 1983:281–284.
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